

### **ABSTRACT OF THE DISCLOSURE**

[0031] A method of designing an improved bearing system is provided. In one embodiment, the method for designing a fluid dynamic bearing system includes determining a first stability ratio for a first journal bearing configuration. The method further includes determining a second stability ratio for a second journal bearing configuration. In one embodiment, the first configuration has two sub-journal bearings and the second configuration has three sub-journal bearings. The two stability ratios may then be compared to determine whether adding a sub-journal increases the stability ratio of the bearing system.

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